



ANTELOPEVALLEY COLLEGE

**Academic Affairs
Course Outline of Record**

Academic Affairs Only

- X New Course 5/24/2007
- COR Revision
- COR Update
- X Pre Req/Advisories 5/24/07
- X Other Changes 12/6/2007
- X Effective Date 200870

COURSE SUBJECT & NUMBER: RADT 107 RADT 107CL

COURSE NAME: Radiographic Positioning and Procedures II

COURSE UNITS: 11 **COURSE HOURS:** 3 hours lecture weekly and 408 total clinical hours

COURSE REQUISITES: *(Follow format of similar courses found in the college catalog.)*

Limitation on Enrollment: Formal admission to the Radiologic Technology program

Prerequisite: Completion of RADT 106 with a grade of "C" or better

Corequisites: Concurrent enrollment in RADT 107CL, 108 and 109

COURSE DESCRIPTION: *(Write a short paragraph providing an overview of topics covered. Be sure to identify target audience--transfer, major, GE, degree/certificate, etc. If repeatable, state the number of times at end of description.)*

This course provides theory, laboratory, and clinical practice in positioning for the skull, facial bones, and contrast procedures for the gastrointestinal and genitourinary tracts. (CSU, AVC)

COURSE OBJECTIVES: *(Use Bloom's taxonomy to formulate concise, performance-based measurable objectives common to all students. Objectives must be closely aligned with course content, assignments, and methods of evaluation.)*

Upon completion of course, the successful student will be able to:

1. Locate and identify specific anatomical structures used for radiographic positioning of the gastrointestinal system, biliary tract, urinary tract, facial bones, and sinuses.
2. Perform radiographic examinations to demonstrate correct radiographic positioning of the gastrointestinal system, biliary tract, urinary tract, facial bones, and sinuses.
3. Demonstrate radiation safety practices in manipulation and operation of equipment necessary to produce diagnostic radiographic and fluoroscopic images using tissue phantoms.
4. Identify modifications and adapt procedures to produce diagnostic radiographic images for age specific, mentally and/or physically challenged or uncooperative patients and patients undergoing mobile examinations.
5. Perform and analyze radiographic procedures accomplished using radiographic, fluoroscopic, and processing equipment and supplies.
6. Evaluate outcomes of radiographic procedures to produce quality radiographic images.
7. Describe patient preparation, contrast media, and possible reactions for contrast studies.
8. Analyze clinical situations in which routine exams cannot be performed.
9. Demonstrate proficiency in performing fluoroscopic procedures, genitourinary procedures, and skull exams independently.
10. Evaluate one's own progress in achieving radiologic technology competencies to meet state and accreditation requirements.

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COURSE CONTENT: *(Enter course content in terms of specific topics or a specific body of knowledge that each instructor must cover. Put topics in outline form with major and minor headings. Title 5 requires that each instructor must cover all material listed below.)*

- I. Gastrointestinal system films (including biliary films) (3 hrs procedures involving contrast media)
 - A. Purpose
 - B. Positioning patients
 - C. Quality assurance
 - D. Pediatric applications
 - E. Terminology (1 hr medical terminology)

- II. Urinary system films (3 hrs procedures involving contrast media)
 - A. Purpose
 - B. Positioning
 - C. Quality assurance
 - D. Terminology

- III. Films of the facial bones and sinuses
 - A. Purpose
 - B. Positioning
 - C. Quality assurance
 - D. Pediatric applications
 - E. Terminology

- IV. Miscellaneous related radiographic procedures
 - A. Fluoroscopic examinations (5 hrs Procedures involving contrast media)
 - B. Trauma and mobile applications
 - C. Positioning for procedures (20 hrs)
 - D. Film critique (19 hrs)

- V. Supervised lab practice
 - A. Vertebral column films
 - B. Bony thorax films
 - C. Gastrointestinal films
 - D. Urinary system films
 - E. Positioning lab for procedures (35 hrs)

- VI. Supervised clinical practice
 - A. Chest procedures
 - B. Bony thorax procedures
 - C. Upper extremities
 - D. Lower extremities
 - E. Pelvic girdle and hips
 - F. Spine
 - G. Abdominal procedures
 - H. Fluoroscopic procedures
 - I. Genitourinary and intravenous pyelogram procedures
 - J. Routine skull exams

- VII. Analysis of personal performance
 - A. Communication skills
 - B. Technical skills
 - C. Routine department functions

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TYPICAL HOMEWORK ASSIGNMENTS: READING, WRITING, COMPUTATIONAL, OTHER

This information is necessary for all credit courses. Assignments should be closely related to course objectives, content, and methods of evaluation. (See sample of a "Model Outline" in the AP&P Standards & Practices handbook.) Include a range of assignments (minimum of three) from which faculty may choose when designing their syllabus.

1. Describe nature and frequency of typical reading assignments if applicable; note if any are required:

Thirty to forty pages of reading from assigned text weekly.

2. Describe nature and frequency of typical writing assignments if applicable; note if any are required:

Weekly journal of personal lab activities

Weekly laboratory reports including positioning procedures used, anatomy identification, and assessment of completed radiographic image

3. Describe nature and frequency of typical computational assignments if applicable; note if any are required:

Weekly calculations of time, distance, and shielding

4. Describe other types of homework assignments that students may be asked to complete; note if any are required:

Answer study questions in the workbook that accompanies the textbook

5. Describe those critical thinking skills that are derived from assignments listed above; be sure that they reflect course objectives.

Evaluation of quality of work produced in lab setting

6. For categories 1-4, describe the estimated time per week it would take a student to complete homework assignments.

Title 5 uses the Carnegie formula for establishing units using a 2:1 ratio as follows: 1 hr. lecture = 2 hrs .homework; 2 hrs. lecture = 4 hrs .homework; etc. For example: reading textbook—2 hours; writing reports—3 hours.

Reading: 4 hours per week reading text

Writing: 1 hour per week writing personal journal of lab activities and completion of laboratory reports

Computational: 1 hour per week calculating time-distance-shielding problems

Other: 1 hr per week answering study questions in the workbook

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METHODS OF INSTRUCTION: *(Methods must be consistent with content and appropriate to objectives; state in terms of what instructor will be doing in order to present course content to students: for example, lecture, demonstration, facilitate group work, etc. Do not list specific instructional equipment.)*

Lecture, demonstration, discussion, supervised lab and clinical practice

METHODS OF EVALUATION: *(These must be clearly related to course content, assignments, and objectives in order to comply with Title 5 requirements. Describe what instructor will be looking for when evaluating various assignments and tests in order to determine whether students have met course objectives. Grades must be based on demonstrated proficiency in subject matter and determined, where appropriate, by essays, objective and essay tests, research papers or projects, problem solving exercises, or skills' demonstrations.)*

Multiple choice, short answer and essay questions to assess achievement of objectives 1, 2, 5, 6, and 7

Performance exam to assess achievement of objectives 1-5

Personal journal of activities to assess achievement of objectives 1-6

Laboratory reports to assess achievement of objectives 1-7

Evaluation of clinical performance to assess achievement of objectives 1-10

Suggested Texts or other Instructional Materials *(list several when possible; include title, author, publisher, date, and latest edition.)*

Bontrager, Kenneth. 2005. Textbook of Radiographic Positioning and Related Anatomy, 6th ed. Mosby.

Bontrager, Kenneth, and Lampignano, J.P. 2005. Textbook of Radiographic Positioning and Related Anatomy: Workbook and Laboratory Manual, Vols. 1 & 2., 6th ed. Mosby.

RADT 107 Radiographic Anatomy and Positioning I Course Packet, current edition (developed by program faculty)

Bontrager, Kenneth. 2002. Pocket Atlas: Handbook of Radiographic Positioning and Techniques. 4th ed. Bontrager Publishing Inc.